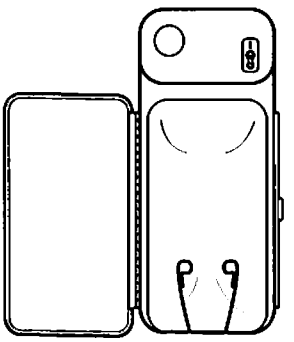

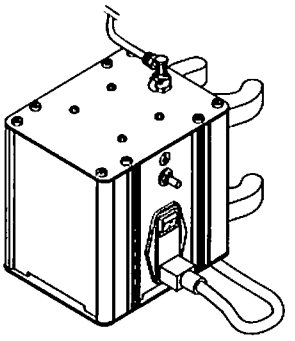

Ranger Pressure Infusor

Model 90032 & Model 90083

Ranger Power Pack

Model 90031 & Model 90033

Operator's Manual

Ranger*

Blood and Fluid Warming Systems

Ranger Druckinfusor
& Ranger Kompressor Benutzerhandbuch

Perfuseur à pression Ranger
& Boîtier d'alimentation Ranger Manuel de l'utilisateur

Infusore a pressione Ranger
& Compressore Power Pack Ranger Manuale d'uso

Infusor de presión Ranger
& Power pack Ranger Manual del operador

Infusor de Pressão Ranger
& Unidade de Abastecimento Ranger Manual do Utilizador

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& Ranger-voedingseenheid Gebruikershandleiding

Ranger trykinfuser
& Ranger strømforsyningsenhed Brugervejledning

Ranger tryckinfusor & Ranger strömenhet Bruksanvisning

Ranger-trykkinfusor & Ranger-strømpakke Brukerhåndbok

Ranger-paineinfuusori & Ranger-akku Käyttöopas

Εγχυτήρας πίεσης Ranger
& Μονάδα παροχής ισχύος Ranger Εγχειρίδιο χρήσης

レンジャープレッシャーインフューザー
& レンジャーパワーパック取扱説明書

Infuzor ciśnieniowy Ranger
& Kompresor Ranger Instrukcja obsługi

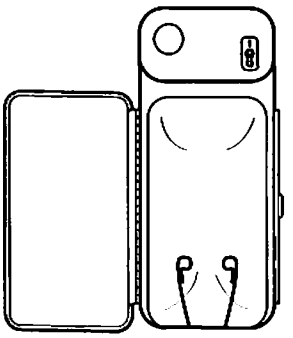
Ranger típusú nyomással működő infúziós készülék
& Ranger tápegység Használati utasítás

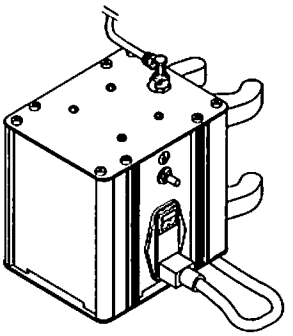
Tlakový infuzor Ranger
& Síťový zdroj Ranger Návod k obsluze

„Ranger" slėgio infuzorius
& „Ranger" maitinimo paketas Naudotojo vadovas

Инфузор системы Ranger
& Насос системы Ranger Руководство по эксплуатации

Ranger压力输液器 & Ranger电源箱 使用说明书





Ranger Pressure Infusor

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Technical Service and Order Placement

Technical Service

USA

TEL: 1-952-947-1200
1-800-733-7775
FAX: 1-952-947-1400

GERMANY

TEL: +49-4154-9934-0
0800-100-1236
FAX: +49-4154-9934-20
0800-100-1324

Order Placement

USA

TEL: 1-952-947-1200
1-800-733-7775
FAX: 1-952-947-1400

GERMANY

TEL: +49-4154-9934-0
0800-100-1236
FAX: +49-4154-9934-20
0800-100-1324

When You Call for Technical Support

Remember, we will need to know the serial number of your unit when you call us. The serial number is located on the back of the unit.

In-Warranty Repair and Exchange

Replacement parts to correct a problem are delivered at no charge. To return a device to Arizant Healthcare Inc. for service, you must obtain a Return Authorization (RA) number from Customer Service. Please use the RA number on all correspondence when returning a device for service. A shipping carton will be delivered to you at no charge, if needed. Call your local supplier or sales representative to inquire about loaner devices while your device is being serviced.

Introduction

Indications for Use

The Ranger pressure infusor is intended to provide pressure to I.V. solution bags when rapid infusion of liquids is required.

Description of the Pressure Infusor and Power Pack

Pressure Infusor

The Ranger pressure infusor can be used with the Ranger blood/fluid warming unit and Ranger standard and high flow disposable set and irrigation warming sets. The infusor can accept solution bags ranging from 500 mL to 1000 mL. The pressure infusor includes a fitting that allows it to be connected to the regulator of a compressed air, CO_2, or nitrogen tank to provide a static operating pressure of 250-350 mmHg. Under flow conditions, the pressure infusor delivers a maximum fluid pressure of 300 mmHg.

Note: The Ranger Model 90083 is calibrated using a 1000 mL solution bag that is approximately 6" x 10" (152.4 x 254 mm). The Ranger Model 90032 is calibrated using a 1000 mL solution bag that is approximately 4" x 11" (101.6 x 279.4 mm). The outlet pressure of the fluid will vary with the surface area and volume of the solution bag. If solution bags of different sizes are used, the pressure of the fluid should be checked by contacting Arizant Healthcare Inc. Technical Support.

The Ranger pressure infusor has no user-adjustable controls. The user places an I.V. solution bag behind the bag retainer and against the inflation bladder located inside the pressure infusor. When the infusor is attached to an external power source, turning the infusor on inflates the inflation bladder and maintains pressure on blood and I.V. solution bags. Turning the infusor off while pressing on the bladder quickly deflates the bladder.

Power Pack

The power pack provides a dedicated power source for the pressure infusor. The power pack is electrically powered (Model 90033: 110-120VAC, 50/60 Hz or Model 90031: 220-240 VAC, 50/60 Hz). The pressure infusor will provide a static operating pressure of 250-350 mmHg when connected to the power pack. Under flow conditions, the pressure infusor delivers a maximum fluid pressure of 300 mmHg.

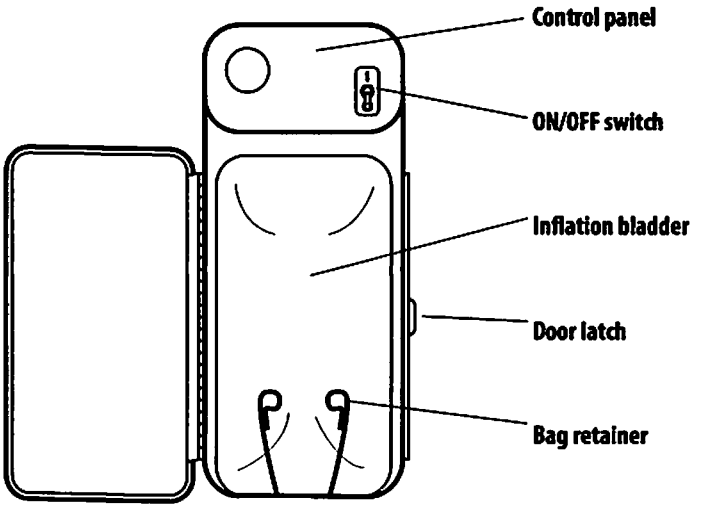
WARNINGS

- Never infuse fluids if air bubbles are present in the fluid line, as air embolism may result.
- This product is designed for pressure infusion only.

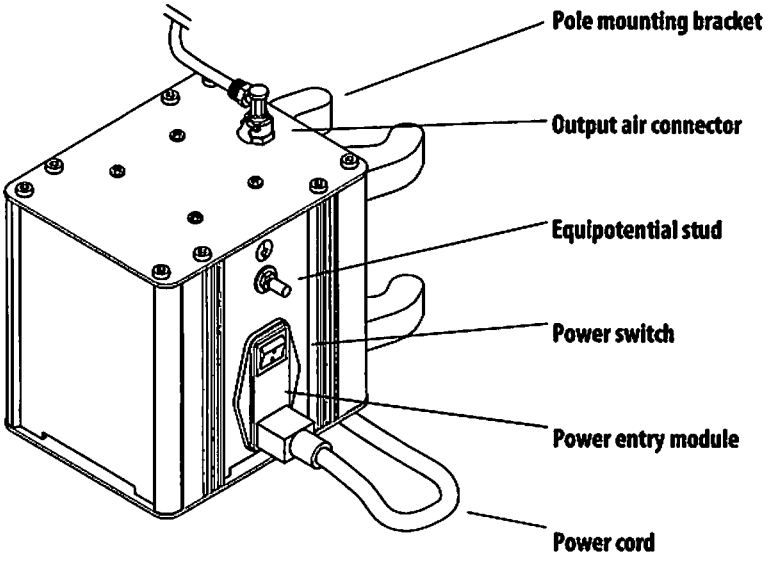
CAUTION

- Do not sterilize the pressure infusor or power pack.
- Do not leave the infusor door open while the unit is turned on; otherwise, the I.V. bag may fall out and the infusor's bladder may disengage from the unit.

The Ranger Pressure Infusor



The Ranger Power Pack



Instructions for Use

Attaching the Pressure Infusor to the I.V. Pole

1. Mount the pressure infusor onto the I.V. pole. The pole diameter should be between 0.75" (1.9 cm) and 1.5" (3.8 cm) with a minimum 25" (63.5 cm) diameter 5-point base. The distance between the pressure infusor and the floor should not be greater than 56" (142 cm).

2. Securely fasten the clamps at the back of the infusor and tighten the knob screws until the infusor is stable.

Connecting the Pressure Infusor to Compressed Nitrogen or Air Bottles/Tanks

Bottled, tank, or wall compressed air, CO_2, or nitrogen can be used if the power pack is not used. The pressure infusor includes a fitting that allows it to be connected to the regulator of a compressed air, CO_2, or nitrogen tank.

WARNING: The compressed gas tank must be equipped with a low pressure regulator which should also be equipped with a pressure gauge. Output pressure must not exceed 60 psi.

Operating the Pressure Infusor

Warning: Remove excess air from I.V. solution containers.

1. Flip the switch to "OFF" before opening the door.

2. Open the infusor door by releasing the metal latch on the right side of the unit.

3. Spike the I.V. solution container. Place the solution bag behind the bag retainer.

4. Make sure the disposable set tubing hangs freely from the pressure infusor. Close the door securely.

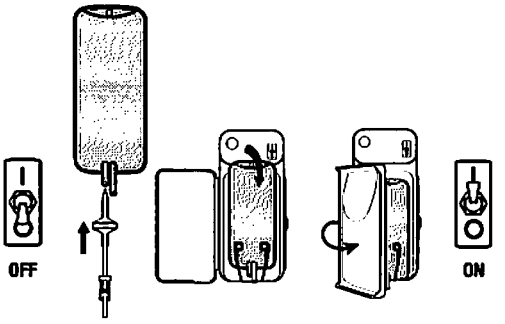
5. Prime the disposable set.

6. Flip the switch to "ON."

7. To change or remove the I.V. solution bag: Flip the switch to "OFF." Open the door, remove the I.V. solution bag. Press on the infusor's bladder to expel the remaining air and insert a new I.V. bag if desired. Close the door securely. Flip the switch to "ON."

CAUTION: If the pressure infusor is ON while the door is open, the inflation bladder is designed to detach from the inflation port. This prevents the bladder from rupturing. Reinstall the bladder by snapping its grommet onto the inflation port located in the cavity of the unit. Realign the bag in the cavity.

Operating the Pressure Infusor



Attaching and Using the Power Pack (Optional)

1. Mount the power pack (with power cord on the bottom) on the I.V. pole below the pressure infusor. The bottom of the power pack must not be higher than 18" (46 cm) from the floor.

2. Securely fasten the clamps at the back of the power pack and tighten the knob screws until the unit is stable.

3. Push the quick-connect coupler into the output air connector located on the top of the power pack.

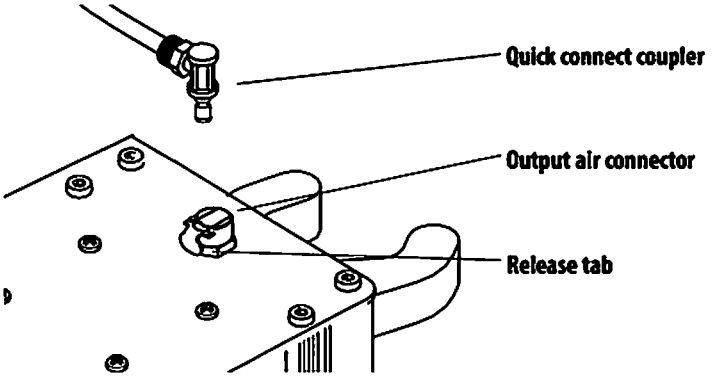
4. Push the end of the tube into the infusor fitting until it stops.

5. Attach the power cord to an appropriately grounded power source. Turn the power pack on.

6. Turn the pressure infusor on and begin the infusion. When the infusion is completed, turn the pressure infusor off.

7. To disconnect the tube, turn the power pack off. Push in the ring on the infusor fitting and pull out the tube. On the power pack, push in the release tab and pull out the quick connect coupler.

Power pack with tubing



Maintenance

Cleaning Instructions

Wipe the pressure infusor and power pack exterior with a damp cloth and germicide. No cleaning is required in the pressure infusor's bladder area unless fluids have spilled inside the unit.

CAUTION: DO NOT immerse in liquids. DO NOT use solvents or alcohol to clean the unit. Failure of the door and other parts may occur.

For service and technical support call Arizant Healthcare Inc. at 1-800-733-7775.

System Storage

Cover and store the pressure infusor and the power pack off the floor in a dry location. Take care not to drop or jar the unit.

Troubleshooting

Problem	Cause	Solution
No infusion	Power pack is not plugged into power source (when using optional power pack accessory).	Plug into power source.
		Flip switch to "ON."
	Unit is not ON.	Insert full solution bag.
	Solution bag is empty.	Connect tube.
	Supply tube from pressurized gas source not connected.	Straighten or replace tubing.
	Kinked tubing.	
Leakage of solution	Bag not spiked securely.	Secure spike in bag.

Specifications

Pressure Infusor

DIMENSIONS	17" high x 13" wide x 10" deep (43.2 cm high x 33 cm wide x 25.4 cm deep)
WEIGHT	15.5 lbs.
MOUNTING	Dual clamp

Power Pack

DIMENSIONS	7" high x 5" wide x 10" deep (17.8 cm high x 12.7 cm wide x 25.4 cm deep)
WEIGHT	6 lbs.
MOUNTING	Dual clamp
CLASSIFICATION	Classified under IEC 601-1 Guidelines (and other national versions of the Guidelines) as Class 1, Type B Applied Part, Ordinary Equipment. Not suitable for use in the presence of flammable anesthetic mixtures with air or with oxygen or nitrous oxide. Classified by Underwriters Laboratories Inc. with respect to electric shock, fire, and mechanical hazards only, in accordance with UL 60601-1 and in accordance with Canadian/CSA C22.2 No. 601.1.

Electrical Characteristics

LEAKAGE CURRENT	Meets leakage current requirements in accordance with UL 60601-1 and IEC 601-1
POWER CORD	15'
DEVICE RATINGS	Model 90033: 110-120 VAC, 50/60 Hz, 0.5 Amp Model 90031: 220-240 VAC, 50/60 Hz, 0.5 Amp
FUSES	Two 0.5 Amp

Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked "Hospital Only" or "Hospital Grade."

Symbols

ON

OFF

Type B Applied Part

Attention,
see accompanying documents